TSG-RAN Working Group 2 (Radio layer 2 and Radio layer 3) ***TSGR2#6(99)886***
Sophia Antipolis 16th to 20th August 1999

**Agenda Item:** 14.3

**Source:** Nokia

**Title:** Traffic Volume Measurement Control on the BCCH

**Document for:** Decision

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## 1 INTRODUCTION

This contribution proposes to add the possibility to use the traffic measurement reporting threshold for load control on the RACH.

## 2 TRAFFIC MEASUREMENT CONTROL ON THE RACH

On the RACH, the traffic reporting criteria are assigned with BCCH broadcasts jointly for all UEs, which have not received individual traffic measurement control assignments.

The maximum size of RLC buffer value can currently be included in traffic measurement reporting criteria to indicate to the UE when the measurement reports should be triggered.

On the RACH, the traffic measurement reporting threshold can also be used for controlling the load of the shared resource. When the maximum size of RLC buffer is exceeded, the UE transmits a traffic measurement report and immediately pauses transmission on the uplink DTCH for a predefined interval to wait for a DCH allocation.

To allow flexibility in UTRAN RRM procedures, it should also be possible to assign different traffic reporting criteria to different sub-RACH channels in the cell. The different sub-RACH channels shall have a sub-RACH identifier, which can be referenced in the BCCH broadcasts.

## 3 CHANGE REQUEST TO TS 25.331

We propose the following modifications to TS 25.331[1]. The formatting is based on [2].

## 3.1 CR to section 10.1.6.1 SYSTEM INFORMATION

| | | | | |
|---|---|---|---|---|
| **PhyCH information elements** | | | | |
| PRACH power control info | M | | | |
| RACH information | | 1 to <maxRACHcount> | | |
| PRACH identifier | M | | | |
| Frequency info | O | | | |
| PRACH info | M | | | |
| FACH information | | 1 to <maxFACHcount> | | |
| Frequency info | O | | | |
| Secondary CCPCH info | M | | | |
| PCH information | | 1 to <maxPCHcount> | | |
| Frequency info | O | | | |
| Secondary CCPCH info | M | | | |
| **Measurement information elements** | | | | |
| | | | | |
| Traffic Volume | | | | |
| Traffic volume measurement Object | | | | |
| Traffic volume measurement quantity | C event trigger | | | |
| Traffic volume measurement reporting quantity | O | | | |
| **CHOICE report criteria** | | | | |
| Traffic volume measurement reporting criteria | | | | |
| Periodical reporting | | | | |

## 3.2 CR to section 10.2.7.10 Traffic volume measurement object

| Information Element/Group name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Target Transport CH ID | M | | | In case of BCCH broadcasting, this element is set to 0 and references the individually assigned RACH id. of each UE. |
| PRACH identifier | C | | | In case of BCCH broadcasting, this element references a given sub-RACH. |

## 3.3 CR to section 10.2.7.27 Traffic volume measurement reporting criteria

| Information Element/Group name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Parameters sent for each transport channel | | 1 to <maxTrCH count> | | |
| Transport CH ID | M | | | In case of BCCH broadcasting, this element is set to 0 and references the individually assigned RACH id. of each UE. |
| PRACH identifier | C | | | In case of BCCH broadcasting, this element references a given sub-RACH. |
| Threshold | M | | | |
| Time to trigger | M | | | Indicates the period of time between the timing of event detection and the timing of sending Measurement Report. |
| Pending time after trigger | M | | | Indicates the period of time during which it is forbidden to send any new measurement reports with the same measurement ID even if the triggering condition is fulfilled again. |
| Tx interruption time after trigger | M | | | Indicates the period of time during which the UE shall block DTCH transmissions on the RACH after a measurement report is triggered. |
| Amount of reporting | M | | | Measurement for the indicated Transport CH ID is “released” after the indicated amount of reporting from the UE itself. FFS |
| Reporting interval | M | | | Indicates the interval of periodical report during the event is in the detected state FFS |

## 4 REFERENCES


[1] TS 25.331, v 1.2.0 1999-07, "Description of the RRC protocol", source: TSG RAN WG2.

[2] Tdoc TSGR2#6(99)720; "Final Report of the email discussion group - Enhanced RRC message and IE tabular descriptions ", source: Rapporteur.